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INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)



Applicant's or agent's file reference CH920020030		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)
International application No. PCT/IB 03/03703	International filing date (day/month/year) 06.08.2003	Priority date (day/month/year) 15.08.2002
International Patent Classification (IPC) or both national classification and IPC H04L12/28		
Applicant INTERNATIONAL BUSINESS MACHINES CORPORATION et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 23.02.2004	Date of completion of this report 16.11.2004
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Heinrich, D Telephone No. +31 70 340-4192 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/IB 03/03703

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-16 as originally filed

Claims, Numbers

1-10 received on 02.10.2004 with letter of 30.09.2004

Drawings, Sheets

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/B 03/03703**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	3,6
	No: Claims	1,2,4,5,7-10
Inventive step (IS)	Yes: Claims	
	No: Claims	1-10
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IB 03/03703

Cited Documents

Reference is made to the following cited document:

- D1: WO 98/35524 A (ERICSSON GE MOBILE INC) 13 August 1998 (1998-08-13)
- D2: EP-A-1 118 837 (NAVIGATION TECH CORP) 25 July 2001 (2001-07-25)
- D3: WO 02/35766 A (WAYPORT INC) 2 May 2002 (2002-05-02)
- D4: WO 01/29574 A (PINPOINT CORP) 26 April 2001 (2001-04-26)

Citations and explanations made in respect of paragraph V:

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Document D1 (see in particular page 1, lines 6 to 9; page 5, lines 21 to 32; page 8, line 32 to page 9, line 5) discloses in accordance with **all** the features of **claim 1** an apparatus for determining the location of a communication device within a wireless network (see page 1, lines 6 to 9), the apparatus comprising at least two transponder units with a reduced medium access control stack unit (see page 6, lines 26 to 37) for communicating with the communication device when the communication device is situated in a coverage area of the wireless network (see page 5, lines 21 to 32); and a processing unit for deriving the location of communication device within the coverage area in dependence on information received from the transponder units (see page 8, line 32 to page 9, line 5).

The subject-matter of **claim 1** therefore is **not new**, Article 33 (2) PCT.

It should furthermore be noted that even if the Applicant intended to argue novelty of claim 1, based on minor differences between the features of said claim and those disclosed in document D1, the subject-matter of claim 1 would **not involve an inventive step**, Article 33(3) PCT, having regard to the disclosure of document D4 (see page 9, line 24 to page 10, line 3 and page 15, line 19 to page 16, line 5).

2. The same considerations as made in above paragraph 1. relating to lack of novelty and inventive step of claim 1 are also valid for **independent claims 8 and 9**, for the reason that claims 8 and 9 include the same feature combination as claim 1 in terms of claims relating to a network, respectively a method.

The subject-matter of **independent claims 8 and 9** therefore is neither new, nor does involve an inventive step, Article 33 (2) PCT.

3. **Dependent claims 2 to 7 and 10** do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty, Article 33 (2) PCT, or inventive step, Article 33 (3) PCT, (see documents D1 to D4).

CLAIMS

1. An apparatus for determining the location of a communication device (10, 40) within a wireless network, the apparatus comprising:

at least two transponder units (TPa-nm, TPb-nm, TPc-nm) for communicating with the communication device (10, 40) when the communication device (10, 40) is situated in a coverage area of the wireless network; and

a processing unit (14) for deriving the location of the communication device (10, 40) within the coverage area in dependence on information received from the transponder units (TPa-nm, TPb-nm, TPc-nm).
2. Apparatus as claimed in claim 1, wherein the processing unit (14) is integral to the communication device (10).
3. Apparatus as claimed in claim 1, wherein the communication device (40) is a tag.
4. Apparatus as claimed in any preceding claim further comprising an access point unit (AP-n) coupled to the transponder units (TPa-nm, TPb-nm, TPc-nm), wherein the access point unit (AP-n) receives information from the transponder units (TPa-nm, TPb-nm, TPc-nm) and forwards the information to the processing unit (14).
5. Apparatus as claimed in claim 4, wherein the access point unit (AP-n) is coupled to the transponder units (TPa-nm) via the communication device (10) and receives information from the transponder units (TPa-nm) via the communication device (10).
6. Apparatus as claimed in claim 4 or 5, wherein the at least two transponder units (TPa-nm, TPb-nm, TPc-nm), the communication device (10, 40), and the access point unit (12) form a basic service set (BSS-n).

7. Apparatus as claimed in any preceding claim comprising three transponder units (TPa-nm, TPb-nm, TPc-nm) within the coverage area.

8. A network comprising an apparatus as claimed in any of the preceding claims.

5 9. A method for determining the location of a communication device (10, 40) within a wireless network, the method comprising the steps of:

arranging at least two transponder units (TPa-nm, TPb-nm, TPc-nm) for communicating with the communication device (10, 40) when the communication device (10, 40) is situated in a coverage area of the wireless network;

10 receiving information from the transponder units (TPa-nm, TPb-nm, TPc-nm); and

deriving the location of the communication device (10, 40) within the coverage area in dependence on the received information.

10. Method as claimed in claim 9, wherein the step of deriving the location of the communication device (10, 40) comprises a triangulation method or a signature method.